

Defining Project-Level Processes

- Projects establish their defined processes by *tailoring* the organization's set of *standard processes* according to *tailoring guidelines*.
- “Tailoring” - Adjustment of project activities to reflect the uniqueness of the project while keeping the project's goals in mind
- Why tailoring is needed
 - The organization's set of standard processes
 - » Must be *general* enough to apply to all projects
 - » May not be directly usable to perform a process (too general)
 - SSC San Diego projects vary widely
 - » Size - one person to 130+ person projects
 - » Complexity - research papers to tri-service system developments with multiple contractors and agencies
 - » Sponsors - SPAWAR, NAVAIR, NAVSEA, ONR, DARPA, ...
 - » Type - research, system dev, SSA, fleet installation, services ...
 - » Domain - C4ISR, marine mammals, decision support, fleet engr, ...
 - The project's processes
 - » Must be *specific* enough to define *how* the project appropriately implements the organization's set of standard processes

Tailoring Considerations

- **Tailoring variables (from SPA Document)**
 - **Type of life cycle strategy: once-through (waterfall), incremental, evolutionary**
 - **Choice of life cycle activity: prototyping, maintenance**
 - **Appropriate system characteristics: COTS Software/Hardware, reuse, embedded firmware**
 - **Your policies, languages, hardware reserve, culture**
 - **Your acquisition strategy: contract type, contractor involvement**
 - **The programming environment in which the process will be used.**
 - **The standards that apply or may be imposed upon the project.**
 - **The financial constraints, contractual obligations and schedules which may be strictly determined by a sponsor.**
 - **The policies imposed by the sponsor or developing agency.**
 - **The technology that will be utilized.**
 - **The level of experience among the users of the process.**
 - **The amount of change which the project may encounter.**

Tailoring Guidelines

Tailoring guidelines cover (1) selecting a standard process, (2) selecting an approved life cycle model, and (3) tailoring the selected standard process and life cycle model to fit project needs. Tailoring guidelines describe what *can* and *cannot* be modified and identify process components that are candidates for modification.

SSC San Diego's Tailoring Guidelines

- In “Description of SSC San Diego Software Process Assets” at <http://sepo.spawar.navy.mil>
- Select and tailor the development strategy (approved life cycle model) using IEEE/EIA 12207.0 Annex B
- Select and tailor standard processes and templates from the SSC San Diego PAL, or Department PAL
- What **CAN** be tailored: attributes that describe how the process is performed, such as number of phases/activities, roles, responsibilities, document formats, formality/frequency of reports or reviews
- What **CAN'T** be tailored: the intent, goals, objectives

Examples of What Can Be Tailored

Activity (Task)

Examples - design, manage, monitor

Tailorable - formality, frequency

Work Products

Examples - plans, design, test scenarios

Tailorable - name, format, media, precision

Resources

Examples - budget, schedule, tools, facilities,
computers

Tailorable - provider, allocation method

Directives

Examples - policies, procedures, practices,
standards

Tailorable - name, format, scope, formality.

Tailoring Process

Tailoring Process (IEEE/EIA 12207.0 Annex A)

- 1. Identify project environment - strategy, activity, requirements**
- 2. Solicit inputs - from users, support team, potential bidders**
- 3. Select processes, activities, documentation, responsibilities**
- 4. Document tailoring decisions and rationale**

Tailoring Process (SPA document)

- 1. Select and tailor processes**
- 2. Document tailoring decisions and rationale**
- 3. Apply and monitor the tailored processes**

Tailoring Examples

PMG task - Measure Project Performance (take out Tier I/II ref's)

- Subactivity a. Collect data
- Tier I Minimum Action/Artifacts
 - » Critical measures taken for management
- Additional Tier II Minimum Action/Artifacts
 - » Actual performance measured and compared to plans; graphs developed
- Advanced Artifacts/References
 - » MS Project used

What is tailorable

- Tier I: Measures used (e.g., \$, milestone dates, % complete)
- Tier II: Measures used, type and format of graphs used to compare planned vs actual

What is NOT tailorable

- Tier I: Critical measures taken for management
- Tier II: Actual performance measured and compared to plans; graphs developed